

Biosec Project Overview

Biometrics & Security (IST-2002-001766)

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Information Society
Technologies



Biometrics

- Results on the deployment of biometric systems
- The integration of biometrics in every-day scenarios imposes challenges that should be addressed:
 - Robustness
 - Trust
 - Technology
 - Procedures
 - Systems
- User concerns on the deployment of security technologies in an open and proactive environment like that of the Ambient Intelligence Space.
 - Data protection
 - Privacy
 - Security perception
 - Usability
 - Acceptance
 - Convenience
 - Discussion with users and citizens



BioSec Objectives

- Enable new technology development in basic biometric technologies to leverage security, across biometric authentication chain



- Put the technology to work and to meet requirements of real world applications





Current status

- Specification of interoperability framework: sensors and storage.
- First prototypes:
 - Aliveness detection in fingerprint,
 - 3D recognition,
 - Voice noise models,
 - Iris recognition.
 - Match-on-Token
- Multiple-biometrics database acquisition tools.
- Two scenarios:
 - Network access with remote authentication
 - Physical access: Helsinki airport
- Results in usability testing



Steps for 2nd year

- Proof of concept of BioSec technologies
- Evolve prototypes of sensors and biometric storage.
- Comparative study with first stage results:
 - Usability and acceptance
 - Interoperability: final version of BioSec API.
 - Performance evaluation.
- Improve tools for multiple-biometrics algorithms research
- Physical access:
 - Interoperation of components and systems in real usage situation
- Remote access:
 - Biometric authentication in new applications and security vulnerabilities
- Standardisation



Challenges ahead

- User-centred issues:
 - Legal framework
 - Identify acceptance barriers
 - Cross-European studies
 - Education
- Technical:
 - Multimodal biometrics
 - Aliveness detection
 - Robustness
 - Secure Storage
 - Network authentication
- Certification:
 - Evaluation of performance
 - Interoperability
 - Security
- Coordination and leadership
- Applications:
 - verification of identity in new areas: e-Government, e-Health, e-Everything.
 - Scenarios for Aml Space
 - Networked applications
 - Every-day applications: private identification
 - Biometric in electronic signature
 - Biometric encryption
 - ROI and cost estimation



Further details

- Coordinator
 - Orestes Sanchez
 - Telefónica I+D, S.A.U.
 - E-mail: biosec-coord@biosec.org
- Website: <http://www.biosec.org>
 - Biometrics Standard Observatory
 - BioSec Interest Group
 - Early notify about BioSec project news





BioSec Consortium

- Project Coordinator is Telefonica I+D
- Industrial partners:
 - Siemens AG, Germany (SIEMENS)
 - Atmel Grenoble, S.A., France (ATMEL)
 - Finnair Oy, Finland (FINNAIR)
 - Giesecke and Devrient GmbH, Germany (GandD)
 - VCON Telecommunications Ltd., Israel (VCON)
- Companies
 - Biometrika SRL, Italy (BIOK)
 - Etra I+D, S.A, Spain (ETRA)
 - Ibermatica, S.A. Spain (IBERMATICA)
 - MediaScore GmbH, Germany
 - Expertnet A.E., Greece (EXPERTNET)
 - Naukowa i Akademicka Sieć Komputerowa, Poland (NASK)

Telefónica

Telefónica
Investigación y Desarrollo

SIEMENS

FINNAIR

ATMEL

VCON

G+D

Giesecke & Devrient

Biometrika

E+T

ETRA
I+D

Ibermática

mediascore

/expertnet

NASK



BioSec Consortium II

- Government Bodies
 - Sisäasiaainministeriö, Ministry of the Interior Finland (MIFIN)
- Research Centres
 - Valtion Teknillinen Tutkimuskeskus, Finland (VTT)
 - Centre for Research and Technology Hellas, Greece (ITI-CERTH)
- Academic centres
 - Tampereen Yliopisto (University of Tampere), Finland (UTA)
 - Alma Mater Studiorum – Universita Di Bologna, Italy (UNIBO)
 - Univ Carlos III de Madrid, Spain (UC3M)
 - Univ Politecnica de Madrid, Spain (UPM)
 - Univ Politecnica de Catalunya, Spain (UPC)
 - Universität zu Köln, Germany (UCOL)
 - Aristotle University Of Thessaloniki, Greece (AUTH)
 - Katholieke Universiteit Leuven, Belgium (KULRD)

